

Decision-making framework for prioritisation of SIT Investment

PMSITAC sub-committee paper– 27 March 2026

Outcomes from this meeting

1. Agree problem definitions for each pillar
2. Agree in principle framework and criteria for assessing priorities

Questions to answered

Learning lessons from overseas

- Which models, or components of models do you see as the best fit for New Zealand, and how much replication of their core features would you support?
- What elements of the comparator countries' approaches do you think are most transferable to the New Zealand context?

Agreeing to problem definitions

- Do you agree with these example problem statements for each pillar?
- What do you think is missing?

Frameworks for evaluating criteria

- Do you want to adopt anything different from the example frameworks?
- Which of these criteria would best support your decision making?
- Are there criteria missing that would support your decision making?
- Given time and data constraints, which criteria would you prioritise to support your decision making?

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Background

3. PMSITAC have asked for information to support identification of priorities:
 - identify pillar problem statements and outcomes
 - apply a comparative advantage and competitive advantage framing to identify where NZ should prioritise effort; noting this will be different between pillars
 - draw lessons from international comparator countries experience of prioritisation of Science, Innovation and Technology research
 - weave in more technology aspects through the pillars.

Roadmap to agreeing a set of refined pillar priorities

4. Your prioritisation work has progressed over time. **Annex 1** outlines your pathway; **Annexes 2-3** highlight best practice international models and frameworks you used when considering priorities.
5. Today we are asking you to consider and provide feedback on:
 - what 'ingredients' from overseas countries prioritisation exercises you think should be replicated
 - pillar level problem definitions
 - a framework for evaluating priorities.

Learning lessons from overseas

6. The nine prioritisation principles and reprioritisation signals you developed (and outlined in your priorities report report) draw on approaches used by comparator economies. The Council's nine prioritisation principles are attached in **Annex 2**.
7. Examples of national approaches that were considered, include:
 - **Ireland** – selected 14 priority areas using four overarching criteria: comparative advantage and global addressable market, research strength, national and global challenges, and public-private R&D complementarity.
 - **Israel** – combines deep industry engagement with 10 criteria including comparative advantage, national challenges, industry collaboration and horizontal system-wide implications.
 - **Finland** – makes priority choices focussed on productivity, growth and renewal, national and global challenges, international partnerships, and domestic expertise and capabilities.
 - **Singapore** – uses national missions anchored in research strengths, informed by expert panels, and characterised by close integration between government, industry and academia.

8. A detailed assessment of comparator country approaches and applicability to the NZ context is provided in **Annex 2**.

Questions: Thinking about these factors and the detailed information in Annex 2:

- Which models, or components of models do you see as the best fit for NZ, and how much replication of their core features would you support?
- What elements of the comparator countries' approaches do you think are most transferable to the New Zealand context?

Agreeing to problem definitions

9. Mission statements for each pillar articulate strategic intent. We have used these mission statements, and other statements through the priorities report to articulate problem definitions for each pillar.

Questions: Thinking about these problem definitions in Table 1:

- Do you agree with these problem statements for each pillar?
- What do you think is missing?

Table 1: Mission statements and implied problem definitions

Pillar & mission	Underlying problems implied in the mission statement
<p>Primary Industries and Bioeconomy Strengthening the foundations of national prosperity</p>	<ul style="list-style-type: none"> • Value creation remains concentrated in mature, low-complexity production models, characterised by commodity exports, limited processing depth, incremental innovation, and weak integration of advanced technologies across value chains • R&D investment is heavily weighted toward incremental, production-focused research, with comparatively limited emphasis on system-level innovation, downstream processing, and platform technologies that enable diffusion across firms and subsectors • Public R&D does not consistently generate scalable technologies, standards, or innovation pathways that support widespread uptake, higher-value outputs, diversification, or sustained private-sector leverage

Pillar & mission	Underlying problems implied in the mission statement
<p>Technology for Prosperity Catalysing existing and future industries and strategic capabilities</p>	<ul style="list-style-type: none"> • New Zealand lacks sufficient depth and continuity of investment in key advanced technology capabilities that underpin high-growth technology sectors and spillovers into the wider economy • Current R&D funding settings insufficiently support translational and integrative research, limiting the development of shared platforms, testbeds, and system-level capabilities required to move technologies from research to scalable application • Fragmented and short-horizon investment constrains the emergence of coherent technology pathways, weakening commercialisation outcomes and the development of durable, internationally competitive technology-led industries
<p>Environmental Sustainability and Resilience Innovating for environmental stewardship and resilience</p>	<ul style="list-style-type: none"> • Environmental risks are increasing in scale, interconnection, and uncertainty, outpacing the tools currently available to anticipate, manage, and adapt to change • SI&T investment remains weighted toward observation, monitoring, and incremental mitigation, rather than predictive, system-level, and decision-enabling technologies • Limited integration of advanced modelling, sensing, and digital technologies constrains scalable environmental solutions, reducing both domestic resilience and globally relevant innovation
<p>Healthy People and a Thriving Society Enhancing health and social outcomes through research, technology and innovation</p>	<ul style="list-style-type: none"> • Research priorities, funding mechanisms, and system incentives are weakly aligned with service delivery and policy needs, reducing translation, uptake, and real-world impact • R&D investment places limited emphasis on implementation-ready evidence, digital infrastructure, and system-level innovation, constraining the ability of health and social systems to adopt new technologies and practices at pace • Persistent inequities and demographic pressures are not sufficiently addressed through mission-aligned research programmes, limiting the contribution of SI&T investment to long-term system resilience and wellbeing outcomes

What frameworks should we use to evaluate priorities?

10. At the 19 March Council meeting, members agreed that further work is needed to refine priorities using an agreed analytical framework.
11. Officials believe the Council's intent aligns closely with both natural advantage (what NZ is inherently well-placed to do) and competitive advantage (where investment and innovation can build enduring strength).
12. Officials note that readily accessible information favours primary product and service trade, while information with clear SI&T utility is limited.

13. For the Primary Industries and Bioeconomy and Technology for Prosperity pillars, officials applied a commercial weighted lens to tease out criteria that reflect advantage and opportunity (**Table 2 refers**).
14. For the Environmental Sustainability and Resilience and Healthy People and a Thriving Society pillars officials applied **a national interest weighted lens** to tease out essential stewardship science and material benefits (**Table 3 refers**).
15. Council members were provided examples of prioritisation frameworks and criteria for their meeting in July 2025 (**Annex 3 refers**).

Questions: Tables 2 and 3 show the criteria considered and selected by officials, when viewing please consider the following questions

- Which of these criteria would best support your decision making?
- Are there criteria missing that would support your decision making?
- Given time and data constraints, which criteria **would you prioritise** to support your decision making?
- Do you want to adopt anything additional from the frameworks in **Annex 3**?

Table 2: Primary Industries and Bioeconomy and Technology for Prosperity criteria

Type	Criteria (includes qual & quant measures)	Availability of info
Competitive advantage	Govt. SI&T spend	●
	Business R&D spend*	●
	Emerging sectors*	●
	Innovation ecosystem	●
	Responsive regulation	●
	Research strength	●
	Workforce and human capital	●
	Frontier success (firms, leaders, etc.)	●
	IP creation (patents)	●
Natural advantage	Geography	●
	Governance & culture (incl institutions)	●
	Relative comparative advantage*	●
National interest	Critical need	●
	Public funding rationale	●
National interest/ economic	Productivity enhancing (ECI)*	●
	International connectedness	●
Economic	Global market opportunity*	●
	Adjacency for new products*	●
	Technology Readiness Level	●

* Indicates that available data is industry, product or export-specific, rather than directly identifying science, innovation or technology areas.

Table 3: Environmental Sustainability and Resilience and Healthy People and a Thriving Society

Type	Criteria (includes qual & quant measures)	Availability of info
Competitive adv.	Research strength Existing capability/ Complementarity Workforce and human capital IP creation (patents)	● ● ● ●
Natural advantage	Geography Governance & culture	● ●
National interest	Market failure Risk, burden, exposure or threat level Coordination failure Strength of public justification Equity impacts or reach Time profile of benefits Supports critical decisions	● ● ● ● ● ● ●
National interest/ economic	International connectedness Innovation spillovers	● ●
Economic	Value realisation Value for money	● ●

Next steps

16. Subcommittee to meet within 1-2 weeks to discuss a draft paper to the full Council seeking their agreement to a refined set of priorities and structured around the frameworks and problem definitions that you have agreed today.
17. This paper will provide you with draft priorities for your agreement.

Indicative timeline*	
2 April	Subcommittee meeting 2 – Agree priorities
8-9 April	Review and approve draft paper to the full Council seeking agreement to the refined pillar priorities
16 April	Council meet to agree refined pillar priorities
By 1 May	Minister provides refined priorities to RFNZ

* Dates are indicative while we confirm a date for the full Council meeting. We will update you with changes as soon as possible.

Annexes

Annex 1: Roadmap to refined priorities

Annex 2: Potential for overseas approaches to prioritisation to transfer to NZ

Annex 3: Alternative frameworks for prioritisation decisions

Annex 1: Roadmap to refined priorities



July-November 2025

Potential prioritisation frameworks

International comparators prioritisation approach

Agreed prioritisation principles, mission statements and deprioritisation signals

Output: PMSITAC priorities report

January 2026

Scoping paper to PMSITAC seeking agreement to deliver refined set of pillar priorities

Output: PMSITAC agreed to commission further work on the pillar priorities

January-March 2026

Priority criteria developed from PMSITAC principles

40 investment areas developed from existing investments

Investment areas tested/ refined with agencies

Investment areas mapped to priority criteria

Output: Paper seeking agreement to refined pillar priorities

March-April 2026

Iterative process with subcommittee to produce advice to the full Council in April.

PMSITAC narrow down ~40 investment areas

Output: Paper seeking agreement to refined pillar priorities

April- 1 May 2026

Full Council discuss and agree a refined set of pillar priorities

Output: Paper seeking agreement to refined pillar priorities

Annex 2: Potential for overseas approaches to prioritisation to transfer to NZ

Annex 2 summarises how these comparator countries approach SI&T prioritisation and is intended to support Council discussion on which features or principles may be relevant for New Zealand’s context, rather than to propose replication of any single model.

The principles identified in the Priorities Report have guided the framing of New Zealand’s SI&T system priorities and reflect many of the key principles observed across comparable countries (see **Figure 2**). Beyond this alignment, are there any additional considerations we should take into account?

Other questions to consider:

Which models, or components of models do you see as the best fit for NZ, and how much replication of their core features would you support?

Beyond the agreed principles and approaches to prioritisation already reflected in New Zealand’s framework, which elements of comparator countries’ approaches do you consider most transferable to the New Zealand context?

Figure 1: Comparator countries’ key principles and approaches to priorities

Comparator countries	Approach to prioritisation	Key principles
Ireland	Identifies national SI&T priorities through a small number of clearly defined priority areas, guided by national strategic settings. ¹ Priorities are selected using explicit criteria, including research strength, market opportunity, national and global challenges, and public–private R&D complementarity.	Uses explicit criteria to identify priority areas. ² Emphasises alignment between research strength and market opportunity. Considers where public investment complements private-sector R&D.
Finland	Identifies SI&T priorities through long-term national strategy and foresight. Priorities focus on productivity, economic growth and renewal, national and global challenges, and domestic expertise and capabilities.	Focuses prioritisation on productivity, economic growth and renewal. Emphasises national capability, expertise and long-term challenges. Uses foresight to inform strategic priority setting.
Norway	Identifies SI&T priorities using a mission-oriented approach. ³ Priorities are framed around strategic research and innovation domains linked to major societal challenges. ⁴	Uses a mission-oriented approach to organise priorities. Frames priorities around major societal challenges. Seeks coherence across strategic research and innovation domains.
Singapore	Identifies SI&T priorities through national missions anchored in research strengths. Priorities are informed by expert input and characterised by close integration between government, industry and academia.	Anchors priorities in national missions linked to research strengths. Emphasises integration between government, industry and academia. Uses strategic coordination to focus research effort.
Israel	Identifies SI&T priorities using multiple explicit criteria. Priorities are informed by comparative advantage, national challenges, industry collaboration, and system-wide implications.	Uses multiple explicit criteria to guide prioritisation. Emphasises industry engagement and collaboration. Focuses on areas of comparative advantage and national challenge.

¹ Ireland’s upcoming SI&T strategy, *Curiosity, Capability, Competitiveness 2026–2030*, centres on national prosperity through stronger enterprise performance and is built around three pillars: talent, economy, and society.

² Ireland selects priority areas only where Irish-based firms already compete or can realistically scale into global markets, ensuring strong commercial opportunity and industry absorptive capacity.

³ Missions shaped by industry needs and opportunities for value creation.

⁴ Norway’s missions are built around five strategic R&I domains—health and welfare, oceans, green transition, cohesion and globalisation, and technology and digitalisation—which anchor its mission-oriented approach.

Figure 2: New Zealand Prioritisation Principles

<p>Research quality</p> <p>Must be rigorous, innovative, and internationally benchmarked. Expert-led assessment ensures coherence across pillars and disciplines.</p>	<p>Relevance to New Zealand</p> <p>Prioritise research that addresses New Zealand's strategic challenges and opportunities, growing national wealth and enhancing societal wellbeing.</p>	<p>Justification for taxpayer investment</p> <p>Public funding must deliver long-term societal value. Stewardship, transparency, and alignment with national priorities are essential.</p>
<p>Public good nature of research</p> <p>Supports knowledge and capability where markets fall short. This includes research into areas of broader societal benefit in social sciences, humanities, and mātauranga Māori.</p>	<p>Industry impact</p> <p>Drives commercialisation, productivity, and economic diversification. Enables knowledge flow into the private sector and supports innovation pipelines.</p>	<p>International investment potential</p> <p>Attracts global partnerships and strengthens New Zealand's science presence. Enhances competitiveness and strategic positioning.</p>
<p>Sector interest</p> <p>Strong sector engagement signals relevance and accelerates uptake. Research should respond to end-user needs and enable co-investment.</p>	<p>Workforce development impacts</p> <p>Builds a diverse, future-ready workforce and supports regional and Māori capability. Strategic oversight ensures system-wide resilience.</p>	<p>Enabling innovation to emerge</p> <p>Investigator-led ideas foster agility and complement mission-led priorities. Contestable funding supports responsiveness and fresh perspectives.</p>

Annex : Alternative frameworks for prioritisation decisions

1. Example of a risk-benefit approach

Sector	Sub sectors	Success measures ⁵	Strategic fit / Importance	Benefits	Risks	Overall weighting
Environment	Freshwater, Minerals research Antarctic research		High Critical research that supports our overall resilience	++ national security (short and long term) and resilience to natural disasters	- - Risk that NZ specific research will not progress if not funded - research cannot be imported or extrapolated from other countries. - - Loss of critical capability to other sectors or lost overseas.	
Primary industries	Animal products processing		Medium	++ Highly commercial sector ++ Well-developed NZ market and export market	- - Lack of support for emerging high potential sectors - - Vulnerable to adverse weather events, which could disrupt economic growth potential	
Health						
Technology	AI, quantum					

⁵ Potential ROI, bibliometrics, research uptake, export indicators

2. Comparative risk analysis (for an illustrative set of research areas)

Risks of deprioritisation	Environment	Primary industries
Disruption of critical science services can increase the nations vulnerability and reduce our resilience to threats from natural disasters	-- High risk to national security (short and long term) and increased vulnerability to natural disasters.	≈ Low risk
Disruption of scientific progress in areas that are de-prioritised	- Risk that NZ specific research will not progress if not funded by NZ. This research cannot be imported or extrapolated from other countries.	-- Risk that if Govt does not fund primary industries there will be a break on innovation and diversification of the sector. products/services.
Disruption of sectors (goods and services) which have short-medium term economic impacts.	-- Reduced funding means that innovation and diversification will be slower putting a break on economic growth from the sector.	- Reduced funding means that innovation and diversification will be slower putting a break on economic growth from the sector.
Disruption of workforce and consideration of a long-term transition planning.	-- Loss of critical capability to other sectors or lost overseas.	- Loss of critical capability to other sectors or lost overseas.

3. Sector opportunity analysis (choice of sectors is illustrative only)

Sector	Globally expanding or changing, and dynamic market	Clusters of research excellence in New Zealand	Anchor firms in New Zealand	Early-stage companies in New Zealand	Active investor activity	Evidence of hard advantages and lack of disadvantages	Role for gov science investment
Biotech	Rapid global growth driven by health, food, and climate needs. Market projected to reach USD\$4.25T by 2033.	NZ has top-ranked universities and strong life sciences research, but GMO regulation has been a barrier.	Few global players; notable examples include LanzaTech, Zespri, and Fonterra.	211 companies identified in 2020, mostly early-stage.	Some VC activity via Bridgewest and Brandon Capital (poor data here)	Strong alignment with future economy goals, but regulatory hurdles exist.	TBD
Aerospace	Sector growing with satellite and launch demand. NZ's share was NZD \$2.47B in 2023-24.	Universities have strengths in space engineering and science, but industry collaboration is limited.	Rocket Lab is a globally credible anchor firm.	Mix of startups and small firms; 45 companies noted in 2021.	Rocket Lab attracted NZD\$454M in 2021; global investment growing.	Launching state status, broad launch angles, and enabling regulation. Govt is not a major customer.	TBD

4. Example criteria for a prioritisation discussion – ranking based approach

	Criteria	Description	Examples	Weight
Long-term societal challenges	National resilience	Economic diversification, climate, environmental, and defence resilience	Defence research, climate change	
	Critical stewardship science		Earthquake and volcanic research	
Economic growth	Economic potential	Innovation & IP potential		
	Commercialisation potential	Scalability & export potential		
	NZ competitive advantage potential	niche research strengths and technical capabilities	Agritech, Rocket launch capability R&D	
Strategic alignment	Alignment to strategic settings and Government priorities		Economic research, Mātauranga Maori research	
	Ability to improve productivity		Digital & tech research	